WEST Search History

| Hide Items | Restore | Clear | Cancel |

DATE: Tuesday, March 09, 2004

Hide?	Set Name	Query	Hit Count
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ	
☐	L32	L31 and (user near5 profil$)	18
☐	L31	L30 and (brows$ same url$1)	47
☐	L30	(predetermined near5 time$) same (user near5 search$)	251
☐	L29	L28 and (brows$ same url$1)	5
☐	L28	L27 and (internet provider$1)	15
☐	L27	L26 and l9	1596
☐	L26	predetermined near5 time$	414911
☐	L25	L24 and updat$	4
☐	L24	L23 and brows$	5
☐	L23	(network provider$1) same (time near5 period$1)	52·
		DB=USPT; PLUR=YES; OP=ADJ	
☐	L22	US-6240450-B1.did.	1
☐	L21	US-6240450-B1.did.	1
		DB=EPAB; PLUR=YES; OP=ADJ	
☐	L20	WO-9715007-A1.did.	1
☐	L19	WO-9715007-A1.did.	1
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ	
☐	L18	(www and download$ and user$1).ti.	3
☐	L17	(user$ and profil$ and search$ and engine$1).ti.	6
☐	L16	L15 and (browse$ same url$1)	6
☐	L15	L14 and (user near5 sett$)	24
☐	L14	L13 and ((remove or update) near5 (data or content$1))	30
☐	L13	l10 and (compar$ near5 time)	39
☐	L12	L10 and 'internet provider'	0
☐	L11	L10 and 'browsed data'	0
☐	L10	L9 and l6	115
☐	L9	'user profile'	8954
☐	L8	l6 and 'comparing time'	7
☐	L7	L6 and 'remove data'	1
☐	L6	'predetermined time' and 'search engines'	549
☐	L5	'predetermined time' and 'comparting documents'	0

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	L4	(compar$ and updat$ and search$ and engine$1).ti.	2
	L3	L2 and (updat$ near5 data)	11
	L2	L1 and (brows$ same compar$)	53
	L1	(predetermin$ near5 time$) same (user near5 brows$)	225

END OF SEARCH HISTORY

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End of Result Set

⬜ ▓▓▓▓ Generate Collection ▓▓▓▓ Print

L32: Entry 18 of 18   File: USPT   Aug 6, 2002

DOCUMENT-IDENTIFIER: US 6430602 B1
TITLE: Method and system for interactively responding to instant messaging requests

Brief Summary Text (10):
It is thus a further object of the invention to provide a method and system for
granting authenticated access to a web page which leverages the authentication
mechanism present in a concurrently operating IM service. Such a secured access
system is suitable for use in an IM-based request servicing system to enable
authenticated access to user profile web pages where a user can easily enter or
retrieve large volumes of information, fill out forms, or engage in other
activities which can be cumbersome at best when implemented in an instant messaging
environment.

Brief Summary Text (13):
It will be appreciated that, in order to generate an accurate answer to many types
of queries, additional or secondary information may be required to fill in unstated
assumptions in the query. To aid in providing this information, a user profile can
be maintained by the system in which commonly needed information is stored. The
types of information suitable for placement in the profile include static data such
as the user's birth date, place of residence, fairly static information, such as
stock portfolio data, and dynamic information, such as information gleaned from the
prior most recent communications with the user. When the system determines that
additional information is required, either by processing the request directly or in
response to a message forwarded by a query response system indicating that more
data is needed to process the request, the information is retrieved from the
profile.

Brief Summary Text (14):
If the needed additional information is not already present in the user's profile
and cannot be reasonably determined through other intermediate data searches, the
user can be solicited to provide the additional information. Such solicitation can
be through a query message sent to the user over the IM network or by means of a
message instructing the user to access and update their profile via a designated
web site. After the additional data is received from the user, the original query
is reprocessed with the additional data and the result is returned to the user. The
additional data can be stored in the user's profile for use in the future. In
addition, information extracted from a prior request or provided in an answer can
also be stored in the user profile for at least a predetermined period of time to
permit the user to ask a series of questions or make a series of request related to
a particular item without having to specify the same item in every request. For
example, a user can issue a query asking the local time in New York City; In a
following query, the user can simply ask "What is the weather today?" The object of
the first request (New York) is used to process the second request. Processing and
reusing data in this way makes the resulting text dialog appear more natural and
simplifies use of the system.

Brief Summary Text (15):
During the course of one or more requests, it may become necessary to ask a user to

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enter a large amount of information or take another action which is easier to
perform in an Internet browser environment. According to a further aspect of the
invention, a method and system is also provided to allow authenticated access to a
particular web page by directing the user to that page using a link which is
provided in an instant message. When a user is to be given authenticated accessed
to a web page, the system generates an access key, which can be, for example, a
random number of a suitable length. A uniform resource locator ("URL") is then
generated which includes the key and which is associated with the selected web
page.

Brief Summary Text (16):
The key-containing URL is forwarded to the user in a message using the instant
messaging protocol. When the user receives the message, the user can click on (or
otherwise select) the URL to activate their web browser and direct it to the
designated location. When the system receives a request for access to a web page,
the specified URL is parsed to extract an embedded key. This key is then used to
identify the particular web page to which the user has been granted access and the
web page is served to the user. To increase security of the system, the various
keys can expire after a short period of time and also after they are used once to
access a web page. Advantageously, this technique leverages the authentication
mechanism of the instant messaging system by granting access to the designated web
pages only to users who have successfully logged in to an instant messaging
service. As a result, the user does not need to divulge their IM password or
remember another user ID and password combination. In addition, because the web
page/key association expires after a single use and in a designated period of time
in any case, it is highly unlikely that the key could be intercepted and used by an
unauthorized party during its validity period and without detection.

Detailed Description Text (5):
Various types of information received during the query response interaction can be
stored for later use in a user profile database 24 which contain various user
profiles associated which each user. The profiles can be keyed to a user screen
name in combination with the name of the instant messaging provider, for example
"john@aol". The profile database 24 is preferably maintained on a separate server
which is accessible to both message processor 12 and query response server 22,
although other data storage configurations are feasible. By storing data provided
by the user during a profile set up session and/or in response to data solicitation
requests, a sophisticated query system can be provided which can make use of
secondary or implied information to return a response which is more accurate or
based on implicit data which need not be entered by the user in each query.

Detailed Description Text (6):
For example, a user may issue a query "What is the weather in Sunnyvale?" The query
response server would process this query, determine the most likely "Sunnyvale"
based on available information about the user, and access a suitable Internet
weather resource to obtain the weather report for, e.g., Sunnyvale, Calif. In
addition, the user's profile can be dynamically updated with the location
Sunnyvale. As a result, a default location (if one was not already present) is
available for use in subsequent location-dependent queries where the user does not
specify a location. For example, the user may subsequently issue the query "Are
there any outdoor concerts today?". In order to accurately answer this question,
the query response server 22 must know a general geographic location. In this
embodiment, the system could use the most recently mentioned geographic location,
Sunnyvale, as the location for the search.

Detailed Description Text (7):
It will be appreciated that a large amount of default information can be provided
in the user profile, such as a user age, or birth date, sex, place of residence,
athletic teams of interest, stock portfolio information, etc. Because of the large
quantity of information which can potentially be stored in the user profile, when a

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query from a user without a profile is detected, a "new user" procedure can be initiated in which the user is requested to provide various types of information to be stored in the user profile. In one embodiment, the user is directed to a specified profile web page in to which they can enter the various types of requested data. A most preferred method of directing the user to a web page is discussed in more detail below. In a more preferred embodiment, a user's profile is dynamically generated using information which is extracted from communications with the user, such as user-initiated queries.

Detailed Description Text (12):
FIG. 4 is a flow chart showing the general operation of a message processor server 30, such as shown in FIG. 2. While this flow will be discussed with reference to the architecture shown in FIG. 2, many aspects of this technique are also applicable to controlling the message processor 12 and separate query response server 22 illustrated in FIG. 1. Turning to FIG. 4, the server waits to receive a query, request, or other communication from a user (step 50). A screen name or other ID associated with a received query is determined and a check is made to see if a user profile has already been associated with the user (step 52). If no profile is found (i.e., the communication is from a new user), a user profile record is created and stored in the profile database 24 (step 54). The received query is then interpreted and acted upon.

Detailed Description Text (13):
In a particular embodiment, the query is interpreted by comparing it to a list of predefined query patterns and identifying the pattern which most closely matches the received query. Once the query pattern is determined, the appropriate action is taken to answer the query or otherwise fulfill the request (step 58). As will be appreciated, certain queries may require secondary or additional information. This information may be present in the user profile. Accordingly, the user profile information is preferably made available to, and can be referenced by, the system which is interpreting and/or acting on an interpreted query, or request.

Detailed Description Text (15):
A first type of query is what can be considered to be an "answerable" query. in other words, this type of query can be answered without additional input from the user (although access to data in the user profile or another secondary source may be required). Following receipt of an answerable query (step 60) a data retrieval request is formulated as required for the appropriate data resource (step 62). If the data resource is local, the data resource is directly accessed as appropriate using the formulated request. If the data resource is remotely located, the resource request is formatted as required for the given resource and forwarded through an appropriate communication link, such as the Internet (step 64). After the answer is received or extracted from the data resource, an answer message is generated and configured to be sent the user as output. (Step 66). The user profile can also be updated, as appropriate, in accordance with any new or updated information garnered from the interaction.

Detailed Description Text (17):
The output message, properly formatted as required, is then forwarded to the user through the IM gateway 16 (step 70). Alternatively, or in addition, the output can be directed to an additional or different address or device specified by the user, either in the particular received query, in a prior query, or as a field in the user profile.

Detailed Description Text (18):
Certain queries received by the user will not be answerable without additional data. For example, a user may submit a query inquiring about "the weather" without specifying a geographic area. In the event that such a query is received, a determination is made regarding the type of data which is missing and (provided the information is not already in the user's profile) a question message soliciting

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this information from the user is generated (steps 72, 74).

Detailed Description Text (19):
In one embodiment, a separate subroutine is initiated during which the system
assumes that the next communication from the user will be a response to the query
message and the data in the response will be stored and used as appropriate. (Not
shown). Preferably, however, the particular answer pattern associated with the
generated questions is added as a temporary pattern to the query list and is ·
associated with the particular user (step 76). The more-data-needed query can also
stored in the user profile for later use. In this manner, and as discussed further
below, a response to the generated question can be detected without requiring
additional and separate data processing routines which limit the responsive actions
which can be taken by the user. Finally, the question message is configured as
output to the user (step 78) and forwarded through the output presentation layer
and the IM gateway (steps 68, 70).

Detailed Description Text (21):
By storing an answer pattern as a temporary pattern at the beginning of the query
pattern list, the system can easily and quickly identify user communications which
are responses to a data needed question. When a response matches an answer pattern
(step 80) the information returned by the user is extracted and added to the
appropriate fields in the user profile (step 82). The original user query which
spawned the "more data needed question" is then retrieved from the user profile and
reissued as if were just received from the user. During this second attempt, the
required information can be retrieved from the user profile and the user's query
executed without interruption (steps 84, 56). In the event that further secondary
or additional information is required, the data solicitation procedure can repeat
until the query is answerable or a failure condition is recognized.

Detailed Description Text (22):
In addition to issuing queries to request information, a user can issue requests to
perform maintenance of their profile. For example, a user can request that the
system add a designated number ·of stock shares to their profile for tracking
purposes. Profile maintenance commands can be identified through general natural
language processing, such as query pattern matching or can be identified through
particular introductory key words, such as "PROFILE:", which indicates that the
request is a profile update and not a general informational query. When a profile
maintenance request is detected (step 86) the appropriate user profile is accessed
(step 88). The user profile is then updated in accordance with the user
specification (step 90). Finally a message indicating the success or failure of the
update can be generated and forwarded to the user (steps 92, 68, 70).

Detailed Description Text (25):
A second pattern 110 is of the form "Add <TICKERSYMBOL> to my portfolio". When this
query pattern is detected, the request is interpreted as a profile maintenance
request. As indicated at block 112, the designated response is to retrieve the
ticker portfolio from the user's profile, add the specified stock ticker symbols to
the portfolio, and save the result. The response 114 to the user is here designated
as a listing of the contents of the updated portfolio.

Detailed Description Text (28):
It is desirable to provide some measure of security when communicating data in this
fashion. Otherwise, an unauthorized user could gain access to a user's profile.
According to a particular aspect of the invention, the system leverages the
security which is provided when users are required to login to an IM system using a
password to thereby provide at least authenticated access to a designated web page.

CLAIMS:

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4. The method of claim 3, further comprising the steps of: accessing a profile associated with the user from a profile database; and making at least a portion of the accessed profile available to the query response server.

5. The method of claim 4, further comprising the steps of, upon, if no profile is available: creating a profile associated with the user; and storing the profile in the profile database.

6. The method of claim 5, wherein the step of creating comprises the steps of: soliciting profile information from the user and storing profile information provided by the user in the profile.

10. The method of claim 9, further comprising the step of saving the received additional data in a profile associated with the user.

11. The method of claim 3, further comprising the steps of: receiving a notification from the query response server requesting additional data; accessing a profile associated with the user; extracting the requested additional data from the user; and making the additional data available to the query response server.

12. The method of claim 11, further comprising the steps of, in the event that the requested additional data is not in the accessed profile: soliciting the requested additional data from the user; and saving the additional data in the profile.

19. The method of claim 14, further comprising the step of storing at least a portion of the secret URL in a profile associated with the first user, the portion including the new access key; the step of identifying comprising accessing a user profile associated with the second user; the step of allowing access comprising access by the second user to the designated web page only if the received access key is in the user profile associated with the second user.

25. The method of claim 22, further comprising the steps of: parsing the message to extract a user ID; accessing a profile associated with the user ID, the profile containing information; and making at least some of the information in the accessed profile available for use during at least one of the evaluating and performing steps.

26. The method of claim 25, wherein, in the event that the request is a request for profile maintenance, the at least one designated action comprises accessing a user profile associated with the user and updating the user profile as specified in the request.

28. The method of claim 25, wherein the step of evaluating comprises: determining if secondary information is required to fulfill the request; and accessing the user profile to retrieve the secondary information.

29. The method of claim 28, wherein the step of evaluating further comprises, in the event that the secondary information is not in the user profile, soliciting the secondary information from the user.

34. The system of claim 33, further comprising a user profile database containing information associated with a plurality of users; the message processor being configured to access a profile associated with the user from the profile database and make at least a portion of the accessed profile available to the query response server during answer formulation.

35. The system of claim 33, wherein the message processor is configured to, if no profile is available, create a profile associated with the user and store the profile in the profile database.

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36. The system of claim 35, wherein the message processor is configured to create a profile by soliciting profile information from the user and storing profile information provided by the user in the profile.

37. The system of claim 35, wherein the message processor is configured to solicit profile information by sending the user an instant message containing a cross-reference link directing the user to a web page configured to receive user input.

40. The system of claim 39, wherein the message processor is configured to save the received additional data in a profile associated with the user.

41. The system of claim 31, wherein the message processor is further configured to: receive a notification from the query response server requesting additional data; access a profile associated with the user; extract the requested additional data from the user; and make the additional data available to the query response server.

42. The system of claim 41, wherein the message server is configured to, if the requested additional data is not in the accessed profile, solicit the requested additional data from the user and save the additional data in the profile.

49. The system of claim 46, further comprising a user profile database; the message processor being further configured to: parse the message to extract a user ID; access a profile associated with the user ID, the profile containing information; and make at least some of the information in the accessed profile available for use during request evaluation and action performance.

50. The system of claim 49, wherein the processor is configured to respond to a profile maintenance request by accessing a user profile associated with the user and updating the user profile as specified in the request.

51. The system of claim 49, wherein the message processor is configured to determine if secondary information is required to fulfill the request and, if so, access the user profile to retrieve the secondary information.

52. The system of claim 51, wherein the message processor is further configured to solicit the secondary information from the user if the secondary information is not in the user profile.

53. The system of claim 52, wherein the message processor is configured to save received secondary information in the user profile.

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